

PF-4 (V-15): sc-23519

BACKGROUND

Platelet factor 4 (PF-4 or PF4) is a 70 amino acid protein that is released from the α -granules of activated platelets and binds with high affinity to heparin. Platelets secrete low molecular weight PF-4, which binds to and neutralizes heparin and related sulfated glycosaminoglycans (GAGs). Its major physiologic role appears to be neutralization of heparin-like molecules on the endothelial surface of blood vessels, thereby inhibiting local antithrombin III activity and promoting coagulation. As a strong chemoattractant for neutrophils and fibroblasts, PF-4 probably has a role in inflammation and wound repair. Both PF4 and eotaxin, a specific chemoattractant for eosinophils, have been shown to exhibit stronger expression in spleens of adult NOA mice (an animal model of allergic or atopic dermatitis) than in younger mice, parallel to the increase in ulcerative skin lesions in older mice. This suggests that PF-4 and eotaxin may play important roles in the etiology of atopic dermatitis. PF-4 is encoded by a small inducible gene (SIG), so called because of its small size and its stimulation with platelet activation. The gene encoding PF-4 maps to human chromosome 4q13.3.

REFERENCES

1. Rybak, M.E., et al. 1989. Interaction of platelet factor four with cultured vascular endothelial cells. *Blood* 73: 1534-1539.
2. Eisman, R., et al. 1990. Structural and functional comparison of the genes for human platelet factor 4 and PF-4alt. *Blood* 76: 336-344.

CHROMOSOMAL LOCATION

Genetic locus: PF4 (human) mapping to 4q13.3.

SOURCE

PF-4 (V-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of mature chain of PF-4 of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-23519 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

PF-4 (V-15) is recommended for detection of precursor and mature chain of PF-4 and PF4V1 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

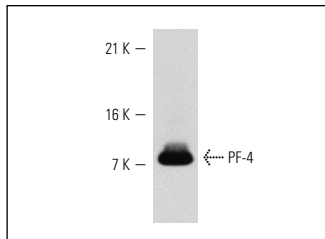
Molecular Weight of PF-4: 10 kDa.

Positive Controls: human platelet lysate: sc-363773.

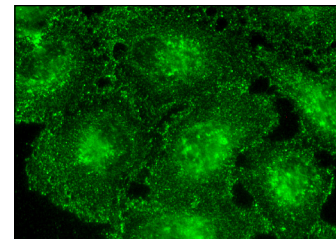
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



PF-4 (V-15): sc-23519. Western blot analysis of PF-4 expression in human platelet extract.



PF-4 (V-15): sc-23519. Immunofluorescence staining of methanol-fixed HeLa cells showing membrane localization.

SELECT PRODUCT CITATIONS

1. Huo, Y., et al. 2003. Circulating activated platelets exacerbate atherosclerosis in mice deficient in apolipoprotein E. *Nat. Med.* 9: 61-67.
2. Huang, C.L., et al. 2006. Disabled-2 is a novel α IIb-integrin-binding protein that negatively regulates platelet-fibrinogen interactions and platelet aggregation. *J. Cell Sci.* 119: 4420-4430.
3. Tseng, W.L., et al. 2010. Reelin is a platelet protein and functions as a positive regulator of platelet spreading on fibrinogen. *Cell. Mol. Life Sci.* 67: 641-653.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.



MONOS
Satisfaction
Guaranteed

Try **PF-4 (D-7): sc-398979** or **PF-4 (G-7): sc-374195**, our highly recommended monoclonal alternatives to PF-4 (V-15).